

REMARKS

Favorable reconsideration and withdrawal of the rejection set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Specification

The specification has been amended to place such in better form. It is respectfully submitted that no new matter has been added.

Claims Status

Claims 1 and 3 through 19 remain pending in the application. Claim 2 has been canceled. Claims 1, 3, 6 through 8, 11, 13, and 15 have been amended to even more succinctly define the invention and/or to improve their form. It is respectfully submitted that no new matter has been added. Claim 1 is the only independent claim pending in the application.

Art Rejection

Claims 1 through 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent Document No. 2000-305342 (Oojiya) in view of Saito, et al.

The rationale underlying the foregoing rejection is succinctly set forth in the Official Action.

Response to Art Rejection

The rejection is respectfully traversed.

Amended Claim 1 calls for an image forming apparatus that includes an image bearing member; charging means, to which a voltage including an AC voltage is applied, for charging the image bearing member; control means for controlling the peak-to-peak

voltage of the AC voltage; developing means for developing an electrostatic latent image formed on the image bearing member with a developer; and residual charge eliminating means for conducting charge elimination on the image bearing member. The control means controls the peak-to-peak voltage of the AC voltage which is applied to the charging means during an image forming period, on the basis of both an AC current flowing when applying the AC voltage having a voltage level of the peak-to-peak voltage that is less than twice a discharge start voltage V_{th} of the image bearing member to the charging means during a non-image forming period and another AC current flowing when applying the AC voltage having a voltage level of the peak-to-peak voltage that is equal to or more than twice the discharge start voltage V_{th} of the image bearing member to the charging means during a non-image forming period. The residual charge eliminating means conducts charge elimination on an area on the image bearing member that passes through a charging position of the charging means when applying the AC voltage having a voltage level of the peak-to-peak voltage that is equal to or less than twice the discharge start voltage V_{th} of the image bearing member to the charging means.

The claimed invention is characterized in that a control means controls a peak-to-peak voltage of an AC voltage, which is applied to the charging means during an image forming period and during a non-image forming period. According to this claimed feature, the applied voltage that is less than twice a discharge start voltage does not cause unwanted discharges. In addition, the other applied voltage, i.e., "the AC voltage having a voltage amount of the peak-to-peak voltage that is equal to or more than twice the discharge" that may cause discharges are applied during a non-image forming period.

In contrast, Oojiya discloses that a voltage applied during an image forming period is determined based on a current value corresponding to a voltage applied during a non-image forming period. Oojiya further discloses that a voltage to be applied during an image forming period is determined based on a current value corresponding to a DC voltage not an AC voltage. Accordingly, the voltage applied during an image forming period is directly determined by a current that causes a discharge. Therefore, Oojiya does not disclose or suggest the claimed control means.

Furthermore, the charge elimination area in Oojiya differs from the claimed charge elimination area. In Oojiya, charge elimination is performed on an area to which a voltage that causes discharge is applied, while a charge elimination is performed at the area to which a voltage that does not cause discharge is applied. Therefore, Oojiya fails to disclose this feature of the claimed invention.

The Examiner notes that Oojiya does not disclose that a voltage applied for charging the image bearing member is in the form of an AC voltage as recited in Claim 1 and that a voltage is applied to the developing means such that the toner is not adhered to the image bearing member and recycled back to the developing means. Accordingly, the Examiner relies on Chigono, et al. for disclosing a charging device in a cleanerless system.

Chigono, et al. merely discloses that an AC voltage is applied to a charge member. However, Chigono, et al. fails to disclose that the claimed control means. Therefore, even if Chigono, et al. were combined with Oojiya, the combination still fail to disclose or suggest the invention as recited in amended Claim 1.

It is also respectfully submitted that the combination rejection is not well founded. The Examiner has provided a *rationalization* for combining the teachings of the cited art

based on the benefits of doing so. A combination rejection is proper only when there is some suggestion or motivation in the cited art *per se* to cause one having ordinary skill in the art to combine the teachings of the cited art. There is nothing in the cited art which supports the position that it can be combined in the manner suggested. Even if the art could be so combined, the mere fact that the art can be combined is not sufficient if there is no suggestions in the art that such a combination is desirable. For example, see ACS Hospital Systems, Inc. v. Montefiore Hospital, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

In view of the foregoing, it is respectfully submitted that amended Claim 1 is allowable over the cited art whether taken individually or in combination.

Dependent Claims

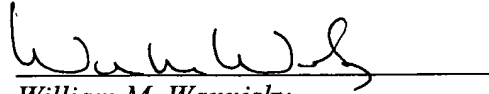
Claims 3 through 19 depend either directly or indirectly from Claim 1 and are allowable by virtue of their dependency and in their own right for further defining Applicants' invention. Individual consideration of the dependent claims is respectfully requested.

Closing Comments

It is respectfully submitted that the pending claims are allowable over the art of record and that the application is in condition for allowance. Favorable reconsideration and early passage to issue of the present application are earnestly solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our New York office at the address shown below.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Wannisky', is written over a horizontal line.

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